Case 1 - The Need

Upper Extremity Prosthetic Control
Financial Disclosure

• **Nothing to Disclose.**
Warning

Videotaping or taking pictures of the slides associated with this presentation is prohibited. The information on the slides is copyrighted and cannot be used without permission and author attribution.
Case 1 – The Need

• 47 y/o man, left hand dominant electrician/electronics technician
  o Abdominal surgery for ruptured appendix
  o Post operative complications
    • Peritonitis
    • Coma
    • Necrotizing fasciitis
      o Significant soft tissue and muscle loss of the left forearm
      o Gangrene of the thumb and fingers of the right hand
      o Gangrene of several toes of both feet
Case 1 – The Need

• 47 y/o man left hand dominant electrician/electronics technician
  ○ Required
  • A left short trans radial amputation (proximal 1/3)
    ○ Loss of all forearm flexor muscles
    ○ Residual proximal forearm extensor muscles
    ○ Skin graft required for closure
    ○ Normal elbow with full ROM
  • Amputation through proximal phalanges of all 5 digits R hand
  • Amputation of great and second toes both feet
Case 1 – The Need

• 47 y/o man left hand dominant electrician/electronics technician
  o Recovered from coma with normal cognitive function
  o Fit with prosthesis for left trans radial amputation
    • Initial body powered (cable operated) prosthesis
    • Myoelectric controlled externally powered prosthesis when stable
      o Single site control
      o i Limb hand
Case 1 – The Need

- Body Powered Prosthesis
- i Limb Powered Prosthetic Hand
Case 1 – The Need

• 47 y/o man left hand dominant electrician/electronics technician
  o Intermittent, fair prosthetic user
  o Extremely frustrated by
    • The mechanics of prosthetic control
    • Limited prosthetic hand function
    • Lack of sensory feedback
    • Inability to return to work – limits of prostheses
Case 1 – The Need

- 47 y/o man left hand dominant electrician/electronics technician

- Major challenge for the Prosthetic Team – **Limited Control Options** due to loss of muscle in the residual limb
Share Your Feedback

• Please use the 2019 AANEM Annual Meeting app to rate this presentation and the speaker(s).

• Your feedback helps us enhance our annual meeting to ensure we are continuing to meet your needs.
• Claiming CME
• Course and Plenary Presentations

Visit: www.aanem.org/resources

Record your attendance hours after each session or do it all at once after the meeting is complete! Credit not recorded by December 15, 2019 will not be reported to ABPN and ABPMR. The AANEM will report ALL Annual Meeting attendees’ credit to ABPN and ABPMR by December, 31, 2019.